

IN THE CLAIMS

Please cancel claims 2, 7, 12, 17-18, 20, 24, 28, 32-33, 35-37 and 42-45.

Please amend the claims as follows.

- 1 1. (Currently Amended) An apparatus comprising:
 - 2 (A) at least one processor;
 - 3 (B) a memory coupled to the at least one processor;
 - 4 (C) first and second logical partitions defined on the apparatus, the first logical
5 partition controlling a shared network I/O adapter and the second logical partition using
6 the shared network I/O adapter controlled by the first logical partition;
 - 7 (D) an I/O adapter sharing mechanism residing in the memory and executed by the
8 at least one processor, the I/O adapter sharing mechanism comprising:
 - 9 (D1) an I/O adapter device driver in the first logical partition, the I/O
10 adapter device driver including a hardware interface to the shared network I/O
11 adapter;
 - 12 (D2) a virtual device driver in the second logical partition, wherein the
13 virtual device driver provides a set of functions at least partially determined by
14 ~~functions available in~~ querying the I/O adapter device driver in the first logical
15 partition for its available functions; and
 - 16 (E) a communication mechanism that controls exchange of information between
17 the virtual device driver and the I/O adapter device driver.
- 1 2. (Cancelled)
- 1 3. (Original) The apparatus of claim 1 further comprising a transfer mechanism that
2 transfers data between the virtual device driver and the shared network I/O adapter
3 without the data passing through the I/O adapter device driver.

1 4. (Original) The apparatus of claim 1 wherein the communication mechanism comprises
2 a partition manager that communicates between the first and second logical partitions.

1 5. (Original) The apparatus of claim 4 wherein the communication mechanism further
2 comprises a hosting interface in the first logical partition that communicates between the
3 I/O adapter device driver and the partition manager, wherein the partition manager
4 communicates between the hosting interface in the first logical partition and the virtual
5 device driver in the second logical partition.

1 6. (Currently Amended) An apparatus comprising:
2 (A) at least one processor;
3 (B) a memory coupled to the at least one processor;
4 (C) first and second logical partitions defined on the apparatus, the first logical
5 partition controlling a shared network I/O adapter and the second logical partition using
6 the shared network I/O adapter controlled by the first logical partition;
7 (C1) the first logical partition comprising:
8 an I/O adapter device driver that includes a hardware interface to
9 the shared network I/O adapter;
10 (C2) the second logical partition comprising:
11 a virtual device driver that receives data to be sent to the shared
12 network I/O adapter and data received from the shared network I/O
13 adapter, wherein the virtual device driver provides a set of functions at
14 least partially determined by ~~functions available in~~ querying the I/O
15 adapter device driver in the first logical partition for its available
16 functions; and
17 (D) a communication mechanism coupled to the first and second logical partitions
18 that communicates between the virtual device driver and the I/O adapter device driver.

1 7. (Cancelled)

1 8. (Original) The apparatus of claim 6 further comprising a transfer mechanism that
2 transfers data between the virtual device driver and the shared network I/O adapter
3 without the data passing through the I/O adapter device driver.

1 9. (Original) The apparatus of claim 6 wherein the communication mechanism comprises
2 a partition manager that communicates between the first and second logical partitions.

1 10. (Original) The apparatus of claim 9 wherein the communication mechanism further
2 comprises a hosting interface in the first logical partition that communicates between the
3 I/O adapter device driver and the partition manager, wherein the partition manager
4 communicates between the hosting interface in the first logical partition and the virtual
5 device driver in the second logical partition.

1 11. (Currently Amended) An apparatus comprising:
2 at least one processor;
3 a memory coupled to the at least one processor;
4 first and second logical partitions defined on the apparatus, the first logical
5 partition controlling a shared network I/O adapter and the second logical partition using
6 the shared network I/O adapter controlled by the first logical partition;
7 an I/O adapter device driver in the first logical partition, the I/O adapter device
8 driver including a hardware interface to the shared network I/O adapter;
9 a virtual device driver in the second logical partition, the virtual device driver
10 providing a set of functions at least partially determined from ~~functions available in~~
11 querying the I/O adapter device driver in the first logical partition for its available
12 functions; and
13 a communication mechanism that communicates between the virtual device driver
14 in the second logical partition and the I/O adapter device driver in the first logical
15 partition.

1 12. (Cancelled)

1 13. (Original) The apparatus of claim 11 further comprising a transfer mechanism that
2 transfers data between the virtual device driver and the shared network I/O adapter
3 without the data passing through the I/O adapter device driver.

1 14. (Original) The apparatus of claim 11 wherein the communication mechanism
2 comprises a partition manager that communicates between the first and second logical
3 partitions.

1 15. (Original) The apparatus of claim 14 wherein the communication mechanism further
2 comprises a hosting interface in the first logical partition that communicates between the
3 I/O adapter device driver and the partition manager, wherein the partition manager
4 communicates between the hosting interface in the first logical partition and the virtual
5 device driver in the second logical partition.

1 16. (Currently Amended) An apparatus comprising:
2 at least one processor;
3 a memory coupled to the at least one processor;
4 first and second logical partitions defined on the apparatus, the first logical
5 partition controlling a shared network I/O adapter and the second logical partition using
6 the shared network I/O adapter controlled by the first logical partition; and
7 a partition manager residing in the memory and executed by the at least one
8 processor, the partition manager performing the steps of:
9 (1) querying an I/O adapter device driver in the first logical partition for its
10 available functions;
11 (2) providing a virtual device driver in the second logical partition with a
12 set of functions at least partially determined from the available functions
13 determined in step (1);
14 [(1)] (3) receiving at least one transmit message from [[a]] the virtual
15 device driver in the second logical partition;
16 [(2)] (4) sending at least one transmit message to [[an]] the I/O adapter
17 device driver in the first logical partition that includes a hardware interface to the
18 shared network I/O adapter; and
19 [(3)] (5) transferring data from the virtual device driver in the second
20 logical partition to the shared network I/O adapter without the data passing
21 through the I/O adapter device driver in the first logical partition.

1 17-18. (Cancelled)

1 19. (Currently Amended) A computer-implemented method for sharing a shared network
2 I/O adapter between first and second logical partitions on a computer apparatus, the
3 method comprising the steps of:
4 (A) providing an I/O adapter device driver in the first logical partition, the I/O
5 adapter device driver including a hardware interface to the shared network I/O adapter;
6 (B) determining a plurality of functions provided by the shared network I/O
7 adapter by querying the I/O adapter device driver for its available functions;
8 (C) providing a virtual device driver in the second logical partition, the virtual
9 device driver providing a set of functions at least partially determined by the plurality of
10 functions determined in step (B); and
11 (D) controlling exchange of information between the virtual device driver and the
12 I/O adapter device driver.

1 20. (Cancelled)

1 21. (Original) The method of claim 19 further comprising the step of transferring data
2 between the virtual device driver and the shared network I/O adapter without the data
3 passing through the I/O adapter device driver.

1 22. (Original) The method of claim 19 wherein step (D) is performed by a partition
2 manager that communicates between the first and second logical partitions.

1 23. (Currently Amended) A computer-implemented method for sharing a shared network
2 I/O adapter between first and second logical partitions on a computer apparatus, the
3 method comprising the steps of:
4 (A) defining the first and second logical partitions, the first logical partition
5 controlling the shared network I/O adapter and the second logical partition using the
6 shared network I/O adapter controlled by the first logical partition, the first logical
7 partition comprising an I/O adapter device driver that includes a hardware interface to the
8 shared network I/O adapter, the second logical partition comprising a virtual device driver
9 that receives data to be sent to the shared network I/O adapter and data received from the
10 shared network I/O adapter;
11 (B) determining a plurality of functions provided by the shared network I/O
12 adapter by querying the I/O adapter device driver for its available functions;
13 (C) providing a set of functions for the virtual device driver that is at least
14 partially determined by the plurality of functions determined in step (B); and
15 (D) communicating between the virtual device driver and the I/O adapter device
16 driver.

1 24. (Cancelled)

1 25. (Original) The method of claim 23 further comprising the step of transferring data
2 between the virtual device driver and the network I/O adapter without the data passing
3 through the I/O adapter device driver.

1 26. (Original) The method of claim 23 wherein step (D) is performed by a partition
2 manager that communicates between the first and second logical partitions.

1 27. (Currently Amended) A computer-implemented method for sharing a shared network
2 I/O adapter between first and second logical partitions on a computer apparatus, the
3 method comprising the steps of:

4 (A) defining the first and second logical partitions on the apparatus, the first
5 logical partition controlling the shared network I/O adapter and the second logical
6 partition using the shared network I/O adapter controlled by the first logical partition;

7 (B) providing an I/O adapter device driver in the first logical partition, the I/O
8 adapter device driver including a hardware interface to the shared network I/O adapter;

9 (C) providing a virtual device driver in the second logical partition, the virtual
10 device driver providing a set of functions at least partially determined from ~~functions~~
11 ~~available in~~ querying the I/O adapter device driver in the first logical partition for its
12 available functions; and

13 (D) communicating between the virtual device driver in the second logical
14 partition and the I/O adapter device driver in the first logical partition.

1 28. (Cancelled)

1 29. (Original) The method of claim 27 further comprising the step of transferring data
2 between the virtual device driver and the shared network I/O adapter without the data
3 passing through the I/O adapter device driver.

1 30. (Original) The method of claim 27 wherein step (D) is performed by a partition
2 manager that communicates between the first and second logical partitions.

1 31. (Currently Amended) A computer-implemented method for sharing a shared network
2 I/O adapter between first and second logical partitions on a computer apparatus, the
3 method comprising the steps of:
4 (A) defining the first and second logical partitions on the apparatus, the first
5 logical partition controlling a shared network I/O adapter and the second logical partition
6 using the shared network I/O adapter controlled by the first logical partition;
7 (B) providing a partition manager that performs the steps of:
8 (B1) querying an I/O adapter device driver in the first logical partition for
9 its available functions;
10 (B2) providing a virtual device driver in the second logical partition with a
11 set of functions at least partially determined from the available functions
12 determined in step (B1);
13 [(B1)] (B3) receiving at least one transmit message from [[a]] the virtual
14 device driver in the second logical partition;
15 [(B2)] (B4) sending at least one transmit message to [[an]] the I/O
16 adapter device driver in the first logical partition that includes a hardware
17 interface to the shared network I/O adapter; and
18 [(B3)] (B5) transferring data from the virtual device driver in the second
19 logical partition to the shared network I/O adapter without the data passing
20 through the I/O adapter device driver in the first logical partition.

1 32-33. (Cancelled)

1 34. (Currently Amended) A computer-readable program product comprising:
2 (A) an I/O adapter sharing mechanism comprising:
3 (A1) an I/O adapter device driver for installation in a first logical partition,
4 the I/O adapter device driver including a hardware interface to a shared network
5 I/O adapter;
6 (A2) a virtual device driver for installation in a second logical partition,
7 the virtual device driver providing a set of functions at least partially determined
8 by ~~functions available in~~ querying the I/O adapter device driver for its available
9 functions; and
10 (A3) a communication mechanism that controls exchange of information
11 between the virtual device driver and the I/O adapter device driver;
12 (B) ~~computer-readable signal-bearing~~ recordable media bearing the I/O adapter
13 sharing mechanism.

1 35-37 (Cancelled)

1 38. (Original) The program product of claim 34 wherein the I/O adapter sharing
2 mechanism further comprises a transfer mechanism that transfers data between the virtual
3 device driver and the shared network I/O adapter without the data passing through the I/O
4 adapter device driver.

1 39. (Original) The program product of claim 34 wherein the communication mechanism
2 comprises a partition manager that communicates between the first and second logical
3 partitions.

1 40. (Original) The program product of claim 39 wherein the communication mechanism
2 further comprises a hosting interface in the first logical partition that communicates
3 between the I/O adapter device driver and the partition manager, wherein the partition
4 manager communicates between the hosting interface in the first logical partition and the
5 virtual device driver in the second logical partition.

1 41. (Currently Amended) A computer-readable program product comprising:

2 (A) a partition manager that performs the steps of:

3 (1) querying an I/O adapter device driver in a first logical partition for its
4 available functions;

5 (2) providing a virtual device driver in a second logical partition with a set
6 of functions at least partially determined from the available functions determined
7 in step (1);

8 [(1)] (3) receiving at least one transmit message from [[a]] the virtual
9 device driver in [[a]] the second logical partition;

10 [(2)] (4) sending at least one transmit message to [[an]] the I/O adapter
11 device driver in [[a]] the first logical partition that includes a hardware interface to
12 a shared network I/O adapter; and

13 [(3)] (5) transferring data from the virtual device driver in the second
14 logical partition to the shared network I/O adapter without the data passing
15 through the I/O adapter device driver in the first logical partition; and

16 (B) ~~computer readable signal bearing~~ recordable media bearing the partition
17 manager.

1 42-45 (Cancelled)